ABSTRACT OF THE DISCLOSURE

First pictures, set at a predetermined interval, to be used as reference pictures for inter-picture prediction of an incoming moving picture and second pictures different from the first pictures are coded. The first pictures are coded by intra-picture coding or unidirectional inter-picture predictive coding. The second pictures are coded by bidirectional inter-picture predictive coding using the first pictures or locally-decoded pictures of the first pictures as the reference pictures, to obtain a moving-picture bitstream. Motion activity is obtained on the incoming moving picture. The moving-picture bitstream is multiplexed with the information of motion activity. An incoming first moving-picture bitstream having bitstreams of the first and the second pictures coded as above at a first code transfer rate is converted into a second moving-picture bitstream at a second code transfer rate. Motion activity is obtained on the incoming first moving-picture bitstream. A decimation rate is set on the second pictures of the incoming first moving-picture bitstream according to at least the motion activity. The bitstreams of the second pictures are only decimated from the incoming first moving-picture bitstream at another predetermined interval according to the decimation rate. A plurality of incoming first moving-picture bitstreams are multiplexed into a moving-picture bitstream at a bit rate lower than a total bit rate of the incoming first moving-picture bitstreams. Each incoming first moving-picture bitstream has first moving-picture bitstreams of the first and the second pictures coded as above. A code amount of the multiplexed bitstream is obtained for each reproduction period as virtual buffer occupancy. A decimation rate is set on the second pictures of the incoming first moving-picture bitstreams according to the virtual buffer occupancy. The bitstreams of the second pictures are decimated from the incoming first moving-picture bitstreams at a predetermined interval according to the decimation rate, to obtain second bitstreams. The second bitstreams are multiplexed to obtain the multiplexed bitstream.